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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/510,746

05/06/2005

Timo Aalto

3502-1068

8554

466

7590

09/28/2006

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EXAMINER

MOONEY, MICHAEL P

ART UNIT

PAPER NUMBER

2883

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/510,746

Applicant(s)

AALTO, TIMO

Examiner

Michael P. Mooney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-15 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/12/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

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The cancellation of claims 1-7 is acknowledged.

### **DETAILED ACTION**

This application is in condition for allowance except for the following formal matters:

Please clean up any grammar and/or minor formalities in the claims. E.g., in claim 8 state "propagating light in a certain direction" rather than "propagating light to a certain direction". Also, please begin the claims with other than just the word "Waveguide".

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

### ***Allowable Subject Matter***

Claims 8-15 are allowed.

The prior art, either alone or in combination, does not disclose or render obvious a waveguide device in which conversion waveguide there are two layers (60.sup.1, 60.sup.2) of different widths (1.sub.60a, 1.sub.60b), the height (h.sub.60a) of the first layer (60.sup.1) being equal to the height of the ridge (61.sup.1) of the ridge-type waveguide (61), and the height (h.sub.60b) of the second layer (60.sup.2) being equal to the height of the base part (61.sup.2) of the ridge-type waveguide (61), and in which the sum of the heights (h.sub.60a, h.sub.60b) of the layers (60.sup.1, 60.sup.2) is equal to the height of the strip waveguide (62), the widths of the two layers (60<sup>1</sup>, 60<sup>2</sup>) being

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arranged to change uniformly between the waveguides to be connected for fitting them together laterally in combination with the rest of claim 8 for the reasons stated by Applicant in the Remarks section filed

It is noted that the claim 8 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious a method in which the conversion waveguide (60) is provided with two layers (60.sup.1, 60.sup.2) of different widths (1.sub.60a, 1.sub.60b) so that the height (h.sub.60a) of the first layer (60.sup.1) is arranged to be equal to the height of the ridge (61.sup.1) of the ridge-type waveguide (61), and the height (h.sub.60b) of the second layer (60.sup.2) is arranged to be equal to the height of the base part (61.sup.2) of the ridge-type waveguide (61), and in which the sum of the heights (h.sub.60a, h.sub.60b) of the layers (60.sup.1, 60.sup.2) is arranged to be equal to the height of the strip waveguide (62), and the widths of the two layers (601, 602) are arranged to change uniformly between the waveguides (61, 62) to be connected for fitting them together in the lateral direction in combination with the rest of claim 12.

It is noted that the claim 12 is allowable because the unique combination of each and every specific element stated in the claim.

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***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Mooney whose telephone number is 571-272-2422. The examiner can normally be reached during weekdays, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael P. Mooney  
Examiner  
Art Unit 2883



Frank G. Font  
Supervisory Patent Examiner  
Art Unit 2883

FGF/mpm  
9/22/06